

CLAIMS

What is claimed is:

5 1. A method for selling engineered electrical systems, the method comprising the steps of:

 generating a database for an electrical system comprising a plurality of programmable devices, the database including device designation data;

 soliciting an order for the system;

10 assembling the system including the plurality of programmable devices; and

 configuring memory objects within the devices based upon the database.

15 2. The method of claim 1, comprising the further step of designing the electrical system including the plurality of programmable devices;

 3. The method of claim 1, wherein the device designation data includes data representative of a physical location of a device in the system.

20 4. The method of claim 1, wherein the device designation data includes data representative of a function of a device in the system.

 5. The method of claim 1, wherein the step of soliciting the order includes computing price data based upon the database.

25 6. The method of claim 1, comprising the further step of storing the database in a computer coupled to the system.

 7. The method of claim 1, wherein the system includes a plurality of subassemblies, at least a portion of the subassemblies including at least one programmable

device, and wherein the memory objects of the programmable devices are configured after arrangement of the devices in the subassemblies.

5 8. The method of claim 7, wherein the memory objects of the programmable devices are configured prior to arrangement of the subassemblies in the system.

 9. The method of claim 7, wherein the memory objects of the programmable devices are configured after arrangement of the subassemblies in the system.

10 10. The method of claim 1, wherein the programmable devices include electrical power switching devices mounted within an enclosure.

 11. The method of claim 10, wherein the system includes a motor control center.

15 12. A method for integrated design, sales and manufacturing of electrical systems, the method comprising the steps of:
 designing an electrical system including a plurality of programmable devices;
 generating a database including device data representative of the programmable devices and their function in the system;
20 generating a sales proposal based upon the database;
 assembling the system; and
 programming the programmable devices based upon the database.

25 13. The method of claim 12, wherein the programmable devices include electrical power switching devices

 14. The method of claim 12, wherein the step of generating the sales proposal includes computing price data based upon the database.

23. The method of claim 20, wherein the step of programming the programmable components is performed following final assembly of the components in the system.

5 24. The method of claim 20, wherein the step of assembling the system includes coupling the programmable components to a data network in the system for accessing data from each programmable component.

10 25. The method of claim 24, wherein the programmable components are programmed via the data network.

26. An integrated sales and manufacturing system comprising:
a design module for development of a component network design and a corresponding database representative of the network design;
15 a sales solicitation module for generation of a sales proposal based upon the network design; and
a configurator adapted to access the database and to transmit data from the database to a plurality of programmable components of the network.

20 27. The system of claim 26, wherein the database includes data identifying the programmable components and locations of the programmable components in the network.

28. The system of claim 26, wherein the sales solicitation module access price data for components of the network for generation of the sales proposal.

25 29. The system of claim 26, wherein the configurator is adapted to download data to each programmable component representative of a function of the component in the network.

15. The method of claim 12, wherein the step of programming is performed following final assembly of the system.

16. The method of claim 12, wherein the step of programming is performed following partial assembly of subunits of the system.

17. The method of claim 12, wherein the step of programming includes downloading device designation data into on-board memory of at least a portion of the programmable devices.

18. The method of claim 17, wherein the device designation data includes a function of a device in the system.

19. The method of claim 17, wherein the device designation data includes a physical location of a device in the system.

20. A method for coordinating sales and manufacturing of electrical systems, the method comprising the steps of:

generating a system design database including data representative of programmable components and component layout for an electrical system;
soliciting a sale of the system based upon the system design;
assembling the system components in accordance with the component layout; and
programming the programmable components based upon the database.

21. The method of claim 20, wherein the programmable components are programmed by downloading a portion of the database into each programmable component.

22. The method of claim 21, wherein the portion of the database includes data representative of a physical location of each programmable component in the system in accordance with the layout.

30. The system of claim 26, wherein the configurator is adapted to download data to each programmable component representative of a physical location of the component in the network.

5 put a 2 31. An integrated system for generating sales proposals for and programming a motor control center including a plurality of programmable electrical components, the system comprising:

10 a database including data representative of programmable electrical components comprising the motor control center, a function of the components in the motor control center, and a physical location of the components in the motor control center;

a sales proposal module for facilitating generation of a sales proposal based upon the database, and

15 a component programming module adapted to access data from the database and to download the data into each programmable component.

32. The system of claim 31, wherein the programming module is adapted to download into each programmable component data representative of at least the function of the component in the motor control center.

20 33. The system of claim 31, wherein the programming module is adapted to download into each programmable component data representative of at least the physical location of the component in the motor control center.

add
a3